

1 What is claimed is:

2 1. A dry cementitious composition comprising cement and  
3 CKD as major components and having a weight ratio of cement  
4 to CKD between about 2/3 and 3/1.

5 2. The dry cementitious composition of claim 1, wherein  
6 the weight ratio is no greater than about 7/3.

7 3. The dry cementitious composition of claim 1, wherein  
8 the weight ratio is no greater than about 3/2.

9 4. The dry cementitious composition of claim 1, wherein  
10 the dry cementitious composition is at least about 70% by  
11 weight cement and CKD.

12 5. The dry cementitious composition of claim 1, wherein  
13 the dry cementitious composition is at least about 90% by  
14 weight cement and CKD.

15 6. The dry cementitious composition of claim 1, wherein  
16 the dry cementitious composition is blended.

17 7. A hydraulic cementitious slurry comprising:  
18 a predetermined amount of a dry cementitious  
19 composition which comprises cement and CKD as major  
20 components and has a weight ratio of cement to CKD is  
21 between about 2/3 and 3/1; and

22 a predetermined amount of water of at least about 6  
23 gallons per sack of the dry cementitious composition.

1 8. The hydraulic cementitious slurry of claim 7, wherein  
2 the weight ratio of cement to CKD is no greater than about  
3 7/3.

4 9. The hydraulic cementitious slurry of claim 7, wherein  
5 the weight ratio of cement to CKD is no greater than about  
6 3/2.

7 10. The hydraulic cementitious slurry of claim 7, wherein  
8 the dry cementitious composition is at least about 70% by  
9 weight cement and CKD.

10 11. The hydraulic cementitious slurry of claim 7, wherein  
11 the dry cementitious composition is at least about 90% by  
12 weight cement and CKD.

13 12. The hydraulic cementitious slurry of claim 7, wherein  
14 the predetermined amount of water is no greater than about  
15 12 gallons per sack of the dry cementitious composition.

16 13. A hard cured cementitious body produced by curing the  
17 hydraulic cementitious slurry of claim 7, wherein the  
18 predetermined amount of a dry cementitious composition which  
19 comprises cement and CKD, the weight ratio of cement to CKD,  
20 and the predetermined amount of water per sack of the dry  
21 cementitious composition are effective values for causing  
22 the hard cured cementitious body to have a compressive  
23 strength of at least about 1000 psi and a maximum  
24 permeability no greater than 0.1 md.

1 14. A process for producing dry blended cement and CKD  
2 useful for forming an effective hydraulic cementitious  
3 slurry when slurried with water comprising:

4 (a) loading into a suitable transporting container a  
5 predetermined weight of CKD;

6 (b) thereafter, loading into the container at a cement  
7 source site, a predetermined weight of cement on top of the  
8 CKD, the predetermined weights producing a weight ratio of  
9 cement to CKD between about  $2/3$  and about  $3/1$ ; and

10 (c) transporting the transporting container site to an off-  
11 loading site and allowing vibration of the transporting  
12 container during transit to automatically dry blend the  
13 cement and CKD sufficiently for forming an effective  
14 hydraulic cementitious slurry when slurried with water,  
15 without requiring any further dry blending of the cement and  
16 CKD after off-loading from the transporting container.

17 15. The process of claim 14, wherein the weight ratio of  
18 cement to CKD is between about  $2/3$  and about  $3/2$ .

19 16. A process for forming a hydraulic cementitious slurry  
20 effective for closing an abandoned well comprising:

21 (a) dry blending a predetermined amount of cement and a  
22 predetermined amount of CKD to produce a dry blended  
23 cementitious composition, the predetermined amounts of  
24 cement and CKD having a weight ratio of cement to CKD  
25 between about  $2/3$  and  $3/1$ ; and

26 (b) slurrying the dry blended cementitious composition with  
27 a predetermined amount of water sufficient to form a  
28 hydraulic cementitious slurry effective for closing an  
29 abandoned well.

1 17. The process of claim 16, wherein the weight ratio of  
2 cement to CKD is between about 2/3 and about 3/2.

3 18. A method of determining cost for supplying dry blended  
4 cement and CKD to an off-load site comprising:

5 (a) determining a cost of procuring a predetermined amount  
6 of cement and CKD from a cement source;

7 (b) determining a transportation cost for delivering the  
8 predetermined amount of cement and CKD in a dry blended  
9 condition from the cement source to the off-load site;

10 (c) determining a cost of off-loading the predetermined  
11 amount of cement and CKD in the dry blended condition at the  
12 off-load site; and

13 (d) determining a cost for supplying cement and CKD in a  
14 dry blended condition to the off-load site by summing each  
15 of the above-mentioned costs.

16 19. A method of determining a plurality of summed cost for  
17 supplying cement and CKD in a dry blended condition to an  
18 off-load site comprising:

19 (a) determining cost of procuring a predetermined amount of  
20 cement and CKD from a plurality of cement sources;

21 (b) determining transportation cost for delivering the  
22 predetermined amount of cement and CKD from each the  
23 plurality of cement sources to the off-load site;

24 (c) determining the cost of off-loading the predetermined  
25 amount of cement and CKD from each source at the off-load  
26 site; and

27 (d) determining cost for supplying blended dry cement and  
28 CKD to the off-load site by summing each of the above-  
29 mentioned costs for each of the cement sources thereby  
30 determining a plurality of summed costs.

1 20. The method of claim 19, further comprising determining  
2 a yield resulting from forming a hydraulic cementitious  
3 slurry for each of the plurality of cement sources thereby  
4 determining a plurality of yields; and  
5 providing a price quote for supplying a predetermined  
6 amount of dry blended cement and CKD to the off-load site  
7 based on the plurality of yields and the plurality of summed  
8 costs.

9 21. A method of determining a lowest cost per unit volume  
10 of a hydraulic cementitious slurry comprising the steps of:  
11 (a) determining cost of procuring a cement and a CKD in a  
12 predetermined weight ratio of cement to CKD at and from a  
13 cement source;  
14 (b) determining yields of hydraulic cementitious slurries  
15 formed by slurrying a dry cement-CKD blend having the  
16 predetermined weight ratio of cement to CKD with various  
17 amounts of water;  
18 (c) determining which of the hydraulic cementitious  
19 slurries when cured over a predetermined period of time will  
20 meet or exceed a predetermined specification; and  
21 (d) determining a hydraulic cementitious slurry having a  
22 lowest cost per unit volume using the dry cement-CKD blend  
23 and which meets or exceeds the predetermined specification.

24 22. The method of claim 21, further comprising determining  
25 a cost for supplying the dry cement-CKD blend from the  
26 cement source to an off-load site using the hydraulic  
27 cementitious slurry determined to have the lowest cost per  
28 unit volume and which meets or exceeds the predetermined  
29 specification.

1 23. The method of claim 21, further comprising:  
2 repeating steps (a), (b), (c) and (d) except with at  
3 least one more dry cement-CKD blend having a predetermined  
4 weight ratio of cement to CKD which is different than the  
5 first mentioned predetermined weight ratio of cement to CKD  
6 and determining the hydraulic cementitious slurry having the  
7 lowest cost per unit volume with the at least one more dry  
8 cement-CKD blend; and  
9 determining a cost for supplying one of the dry blends  
10 of the cement and the CKD from the cement source to an off-  
11 load site based on the hydraulic cementitious slurry  
12 determined to have the lowest cost per unit volume and which  
13 meets or exceeds the predetermined specification.

14 24. The method of claim 23, wherein the first mentioned  
15 predetermined weight ratio of cement to CKD is about 2/3,  
16 and wherein the at least one more predetermined weight ratio  
17 of cement to CKD is about 3/2.

18 25. The method of claim 24, wherein the at least one more  
19 predetermined weight ratio of cement to CKD also includes a  
20 weight ratio of about 1/1.

21 26. The method of claim 25, wherein the predetermined  
22 specification is a cured plug having at least a  
23 predetermined compressive strength while not exceeding a  
24 predetermined maximum permeability.